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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,371	12/28/2004	Hiroshi Mashima	263787US2PCT	6811

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EXAMINER	
STOUFFER, KELLY M	

ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
08/05/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/518,371	MASHIMA ET AL.	
	Examiner	Art Unit	
	KELLY STOUFFER	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) *7 and 8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☒ Claim(s) *6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/28/04 4/10/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-6 in the reply filed on 13 June 2008 is acknowledged. The traversal is on the ground(s) that the apparatus in claims 7-8 was specifically designed for the purpose of performing the method. This is not found persuasive because it was shown by the examiner in the lack of unity requirement of 15 May 2008 that parallel plate reactors are common in the art for generating plasma to deposit a film and that the inventions together do not make a contribution over the prior art. For further evidence, see the following rejections.

The requirement is still deemed proper and is therefore made FINAL.

Claims 7-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Objections

Claim 6 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on any other multiple dependant claims. See MPEP § 608.01(n). Accordingly, claim 6 has not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al. (EP 1146569).

As to claim 1, Ito et al. teaches a method for PECVD where a discharge electrode and a substrate are parallel to each other in vacuum chamber with a deposition gas for forming a film. High frequency electric power generated by a feeding circuit is fed to feeding points to the discharge electrode through external cables and internal cables corresponding with the external cables to generate plasma. The phases of the high frequency electric power at the feeding points is changed by changing characteristics of the external cables with the power being fed to the feeding points. See paragraphs 0062-0064 and Figures 8-9.

As to claim 3, the electrical characteristics are changed by changing lengths of the external cables in paragraph 0065, for example.

As to claim 4, the lengths are changed by detaching connectors (paragraph 0065, for example).

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by De Francesco (US 5733511).

As to claim 1, De Francesco teaches a method for PECVD where a discharge electrode and a substrate are parallel to each other in vacuum chamber with a deposition gas for forming a film (abstract, Figure 6). High frequency electric power generated by a feeding circuit is fed to feeding points to the discharge electrode through external cables and internal cables corresponding with the external cables to generate plasma. The phases of the high frequency electric power at the feeding points is changed by changing characteristics of the external cables with the power being fed to the feeding points. See column 2 line 51- column 3 line 17, for example.

As to claim 2, De Francesco teaches modifying electrical characteristics of external cables based on plasma conditions in order to make more uniform plasma (columns 4-5 lines 38-20, for example).

As to claim 3, the electrical characteristics are changed by changing lengths of the external cables in columns 2-3 lines 50-17.

As to claim 4, the lengths are changed by changing connectors in columns 2-3 lines 50-17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. in view of De Francesco.

Ito et al. includes modifying the external cables, but not the electrical characteristics based on the plasma conditions. De Francesco teaches modifying electrical characteristics of similar external coaxial cables based on plasma conditions in order to make more uniform plasma (columns 4-5 lines 38-20, for example). Therefore it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Ito et al. to include modifying electrical characteristics of the external coaxial cables based on plasma conditions as taught by De Francesco in order to make more uniform plasma.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. in view of Pote et al. (US 5239134).

Ito et al. includes modifying the external cables, but not by adding an insulating material and changing electrical characteristics by changing the dielectric constant of the material. Pote et al. teaches making such a coaxial cable and modifying the dielectric constant so that the phase propagation of the cable, etc. is more easily controllable (abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ito et al. to include a cable such as that taught by Pote et al. in order to make a cable in which the phase propagation of the cable, etc. is more easily controllable (abstract).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Francesco in view of Pote et al.

De Francesco includes modifying the external cables, but not by adding an insulating material and changing electrical characteristics by changing the dielectric constant of the material. Pote et al. teaches making such a coaxial cable and modifying the dielectric constant so that the phase propagation of the cable, etc. is more easily controllable (abstract). Therefore it would have been obvious to one of ordinary skill in

the art at the time of the invention to modify De Francesco to include a cable such as that taught by Pote et al. in order to make a cable in which the phase propagation of the cable, etc. is more easily controllable (abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Blonigan et al. (US 6359250) teaches a similar method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY STOUFFER whose telephone number is (571)272-2668. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kelly Stouffer
Examiner
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/Timothy H Meeks/
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